

# EXHIBIT A

SUPREME COURT OF THE STATE OF NEW YORK  
NEW YORK COUNTY

ALEX A. DE SOTO, CHARLES BREAUX, DONALD  
WRIGHT, GEORGE MCMULLIN, JAMES PARSON,  
KENNETH KAUFULD, KEVIN ROONEY, MICHAEL  
COATES, MICHAEL J. RICHTER, ROBERT DIPOLI,  
AND SANDRA HANKAMER

Index No. \_\_\_\_\_/2023

*Plaintiffs,*

-VS-

**COMPLAINT AND  
DEMAND FOR JURY  
TRIAL**

Trial by jury is desired in  
the County of New York

Venue is designated  
pursuant to CPLR § 503(a)  
& (c) in that the causes of  
action occurred in this  
county.

THE 3M COMPANY, f/k/a Minnesota Mining and  
Manufacturing Co., AGC CHEMICALS AMERICAS  
INC., AMEREX CORPORATION, ARKEMA INC.,  
ARCHROMA U.S. INC., BUCKEYE FIRE  
EQUIPMENT COMPANY, CARRIER GLOBAL  
CORPORATION, CHEMDESIGN PRODUCTS INC.,  
CHEMGUARD INC., CHEMICALS INC., CLARIANT  
CORPORATION, individually and as successor in  
interest to Sandoz Chemical Corporation, CORTEVA,  
INC., individually and as successor in interest to DuPont  
Chemical Solutions Enterprise, DEEPWATER  
CHEMICALS, INC., DUPONT DE NEMOURS INC.,  
individually and as successor in interest to DuPont  
Chemical Solutions Enterprise, DYNAX  
CORPORATION, E. I. DUPONT DE NEMOURS AND  
COMPANY, individually and as successor in interest to  
DuPont Chemical Solutions Enterprise, KIDDE-  
FENWAL, INC., individually and as successor in  
interest to Kidde Fire Fighting, Inc., NATION FORD  
CHEMICAL COMPANY, THE CHEMOURS  
COMPANY, individually and as successor in interest to  
DuPont Chemical Solutions Enterprise, THE  
CHEMOURS COMPANY FC, LLC, individually and as  
successor in interest to DuPont Chemical Solutions  
Enterprise, and TYCO FIRE PRODUCTS, LP,  
individually and as successor in interest to The Ansul  
Company, and DOE DEFENDANTS 1-20, fictitious  
names whose present identities are unknown,

*Defendants.*

**COMPLAINT AND DEMAND FOR JURY TRIAL**

Plaintiffs, Alex A. De Soto, Charles Breaux, Donald Wright, George McMullin, James Parson, Kenneth Kaufold, Kevin Rooney, Michael Coates, Michael J. Richter, Robert Dipoli, Sandra Hankamer (“Plaintiffs”), by and through their undersigned counsel, hereby files this Complaint, against Defendants 3M COMPANY, f/k/a Minnesota Mining and Manufacturing Co., AGC CHEMICALS AMERICAS INC., AMEREX CORPORATION, ARKEMA INC., ARCHROMA US. INC., BUCKEYE FIRE EQUIPMENT COMPANY, CARRIER GLOBAL CORPORATION, CHEMDESIGN PRODUCTS INC., CHEMGUARD INC., CHEMICALS, INC., CLARIANT CORPORATION, CORTEVA, INC., DEEPWATER CHEMICALS, INC., DUPONT DE NEMOURS INC., DYNAX CORPORATION, E. I. DUPONT DE NEMOURS AND COMPANY, KIDDE-FENWAL, INC., NATION FORD CHEMICAL COMPANY, THE CHEMOURS COMPANY, THE CHEMOURS COMPANY FC, LLC, and TYCO FIRE PRODUCTS, LP, and DOE DEFENDANTS 1-20 (collectively “Defendants”) alleges, upon information and belief, as follows:

**INTRODUCTION**

1. Plaintiffs bring this action for damages for personal injury resulting from exposure to aqueous film-forming foams (“AFFF”) containing the toxic chemicals collectively known as per and polyfluoroalkyl substances (“PFAS”). PFAS includes, but is not limited to, perfluorooctanoic acid (“PFOA”) and perfluorooctane sulfonic acid (“PFOS”) and related chemicals including those that degrade to PFOA and/or PFOS.
2. AFFF is a specialized substance designed to extinguish petroleum-based fires. It has been used for decades by military and civilian firefighters to extinguish fires in training and in response to Class B fires.

3. Defendants collectively designed, marketed, developed, manufactured, distributed, released, trained users, produced instructional materials, promoted, sold, and/or otherwise released into the stream of commerce AFFF with knowledge that it contained highly toxic and bio persistent PFASs, which would expose end users of the product to the risks associated with PFAS. Further, defendants designed, marketed, developed, manufactured, distributed, released, trained users, produced instructional materials, promoted, sold and/or otherwise handled and/or used underlying chemicals and/or products added to AFFF which contained PFAS for use in firefighting.

4. PFAS binds to proteins in the blood of humans exposed to the material and remains and persists over long periods of time. Due to their unique chemical structure, PFAS accumulates in the blood and body of exposed individuals.

5. PFAS are highly toxic and carcinogenic chemicals. Defendants knew, or should have known, that PFAS remain in the human body while presenting significant health risks to humans.

6. Defendants' PFAS-containing AFFF products were used by the Plaintiff in their intended manner, without significant change in the products' condition. Plaintiff was unaware of the dangerous properties of the Defendants' AFFF products and relied on the Defendants' instructions as to the proper handling of the products. Plaintiff's consumption, inhalation and/or dermal absorption of PFAS from Defendant's AFFF products caused Plaintiff to develop the serious medical conditions and complications alleged herein.

7. Through this action, Plaintiff seeks to recover compensatory and punitive damages arising out of the permanent and significant damages sustained as a direct result of exposure to Defendants' AFFF products at various locations during the course of Plaintiff's training and

firefighting activities. Plaintiff further seeks injunctive, equitable, and declaratory relief arising from the same.

### **JURISDICTION AND VENUE**

8. This Court has jurisdiction because Defendant Dynax Corporation’s principal place of business is located at 103 Fairview Park Drive, Elmsford, New York 10523.

9. Venue is proper in this District under CPLR §503 (a) because the events, omissions and harms that are the basis of Plaintiffs claims occurred in substantial party in this District.

10. This Court has personal jurisdiction over Defendants by virtue of each Defendants’ regular and systematic contacts with New York, including, among other things, purposefully marketing, selling and/or distributing their AFFF/Component Products to and within New York, and because they have the requisite minimum contacts with New York necessary to constitutionally permit the Court to exercise jurisdiction over them consistent with traditional notions of fair play and substantial justice.

### **PARTIES**

#### **A. Plaintiffs**

11. Alex A. De Soto is a resident and citizen of Tucson, Arizona. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with high blood pressure, liver problems and kidney disease as a result of exposure to Defendants’ AFFF products.

12. Charles Breaux is a resident and citizen of Ridge, New York. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with kidney cancer as a result of exposure to Defendants’ AFFF products.

13. Donald Wright is a resident and citizen of Matty Dale, New York. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed as a result of kidney cancer exposure to Defendants' AFFF products.

14. George McMullin is a resident and citizen of Winston, Georgia. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with a mass on the liver, a mass on kidney, liver problems, liver cancer and kidney cancer as a result of exposure to Defendants' AFFF products.

15. James Parson is a resident and citizen of Pleasant Grove, Alabama. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with kidney cancer as a result of exposure to Defendants' AFFF products.

16. Kenneth Kaufold is a resident and citizen of Farmingdale, New York. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with a carcinoid tumor and prostate cancer as a result of exposure to Defendants' AFFF products.

17. Kevin Rooney is a resident and citizen of Natick, Massachusetts. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with high blood pressure, liver problems, high cholesterol, and prostate cancer as a result of exposure to Defendants' AFFF products.

18. Michael Coates is a resident and citizen of Burlington, Massachusetts. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with testicular cancer as a result of exposure to Defendants' AFFF products.

19. Michael J. Richter is a resident and citizen of East Marion, New York. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with a carcinoid tumor and kidney disease as a result of exposure to Defendants' AFFF products.

20. Robert Dipoli is a resident and citizen of Moultonborough, New Hampshire. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with prostate cancer as a result of exposure to Defendants' AFFF products.

21. Sandra Hankmer is a resident and citizen of Vernon Hill, Vancouver. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and to extinguish fires during his working career as a military and/ or civilian firefighter. Plaintiff was diagnosed with renal cell carcinoma as a result of exposure to Defendants' AFFF products.

**B. Defendants**

22. The term "Defendants" refers to all Defendants named herein jointly and severally.

i. The AFFF Defendants

23. The term "**AFFF Defendants**" refers collectively to Defendants 3M Company, Angus International Safety Group, Ltd., Amerex Corporation, Buckeye Fire Equipment Company, Carrier Global Corporation, Central Sprinkler, LLC, Chemguard Inc., Fire Products GP Holding, LLC, Johnson Controls International PLC, Kidde-Fenwal, Inc., and Tyco Fire Products L.P.,

24. **Defendant The 3M Company f/k/a Minnesota Mining and Manufacturing Co. (“3M”)** is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business located at 3M Center, St. Paul, Minnesota 55144-1000.

25. Beginning before 1970 and until at least 2002, 3M designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

26. **Defendant Amerex Corporation (“Amerex”)** is a corporation organized and existing under the laws of the State of Alabama, with its principal place of business located at 7595 Gadsden Highway, Trussville, AL 35173.

27. Amerex is a manufacturer of firefighting products. Beginning in 1971, it was a manufacturer of hand portable and wheeled extinguishers for commercial and industrial applications.

28. In 2011, Amerex acquired Solberg Scandinavian AS, one of the largest manufacturers of AFFF products in Europe.

29. On information and belief, beginning in 2011, Amerex designed, manufactured, marketed distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

30. **Defendant Tyco Fire Products LP (“Tyco”)** is a limited partnership organized under the laws of the State of Delaware, with its principal place of business located at One Stanton Street, Marinette, Wisconsin 54143-2542.

31. Tyco is the successor in interest of The Ansul Company (“Ansul”), having acquired Ansul in 1990.



32. Beginning in or around 1975, Ansul designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

33. After Tyco acquired Ansul in 1990, Tyco/Ansul continued to design, manufacture, market, distribute, and sell AFFF products containing PFAS, including but not limited to PFOA and PFOS.

34. **Defendant Chemguard, Inc. (“Chemguard”)** is a corporation organized under the laws of the State of Texas, with its principal place of business located at One Stanton Street, Marinette, Wisconsin 54143.

35. On information and belief, Chemguard designed, manufactured, marketed, distributed, and sold AFFF products containing PFAS, including but not limited to PFOA and PFOS.

36. On information and belief, Chemguard was acquired by Tyco International Ltd. in 2011.

37. On information and belief, Tyco International Ltd. later merged into its subsidiary Tyco International plc in 2014 to change its jurisdiction of incorporation from Switzerland to Ireland.

38. **Defendant Buckeye Fire Equipment Company (“Buckeye”)** is a corporation organized under the laws of the State of Ohio, with its principal place of business located at 110 Kings Road, Kings Mountain, North Carolina 28086.

39. On information and belief, Buckeye designed, manufactured, marketed, distributed, and sold AFFF products containing PFAS, including but not limited to PFOA and PFOS.

40. **Defendant Kidde-Fenwal, Inc. (“Kidde-Fenwal”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business at One Financial Plaza, Hartford, Connecticut 06101.

41. On information and belief, Kidde-Fenwal was an operating subsidiary of Kidde P.L.C. and manufactured AFFF following Kidde P.L.C.’s acquisition by United Technologies Corporation.

42. On information and belief, Kidde-Fenwal is the entity that divested the AFFF business unit now operated by National Foam in 2013.

43. **Defendant Carrier Global Corporation (“Carrier”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business at 13995 Pasteur Boulevard, Palm Beach Gardens, Florida 33418.

44. On information and belief, Carrier was formed in March 2020 when United Technologies Corporation spun off its fire and security business before it merged with Raytheon Company in April 2020.

45. On information and belief, Kidde-Fenwal became a subsidiary of Carrier when United Technologies Corporation spun off its fire and security business in March 2020.

46. On information and belief, the AFFF Defendants designed, manufactured, marketed, distributed, and sold AFFF products containing PFOS, PFOA, and/or their chemical precursors that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed at the Sites.

ii. The Fluorosurfactant Defendants

47. The term **“Fluorosurfactant Defendants”** refers collectively to Defendants 3M, , Arkema Inc., ChemDesign Products Incorporated, Chemguard Inc., Deepwater Chemicals, Inc.,

E.I. DuPont de Nemours and Company, The Chemours Company, The Chemours Company FC, LLC, DuPont de Nemours Inc., and Dynax Corporation.

48. **Defendant Arkema Inc.** is a corporation organized and existing under the laws of Pennsylvania, with its principal place of business at 900 First Avenue, King of Prussia, PA 19406.

49. Arkema Inc. develops specialty chemicals and polymers.

50. Arkema, Inc. is an operating subsidiary of Arkema France, S.A.

51. On information and belief, Arkema Inc. designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

52. **Defendant ChemDesign Products Inc. (“ChemDesign”)** is a corporation organized under the laws of Delaware, with its principal place of business located at 2 Stanton Street, Marinette, WI, 54143.

53. On information and belief, ChemDesign designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products

54. **Defendant Deepwater Chemicals, Inc. (“Deepwater”)** is a corporation organized under the laws of Delaware, with its principal place of business located at 196122 E County Road 40, Woodward, OK, 73801.

55. On information and belief, Deepwater Chemicals designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products

56. **Defendant Dynax Corporation (“Dynax”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 103 Fairview Park Drive, Elmsford, New York 10523.

57. On information and belief, Dynax entered into the AFFF market on or about 1991 and quickly became a leading global producer of fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors.

58. On information and belief, Dynax designed, manufactured, marketed, distributed, and sold fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

59. **Defendant E.I. du Pont de Nemours & Company (“DuPont”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 974 Centre Road, Wilmington, Delaware 19805.

60. **Defendant The Chemours Company (“Chemours Co.”)** is a limited liability company organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, P.O. Box 2047, Wilmington, Delaware, 19899.

61. In 2015, DuPont spun off its performance chemicals business to Chemours Co., along with vast environmental liabilities which Chemours Co. assumed, including those related to PFOS and PFOA and fluorosurfactants. On information and belief, Chemours Co. has supplied fluorosurfactants containing PFOS and PFOA, and/or their chemical precursors to manufacturers of AFFF products.

62. On information and belief, Chemours Co. was incorporated as a subsidiary of DuPont as of April 30, 2015. From that time until July 2015, Chemours Co. was a wholly-owned subsidiary of DuPont.

63. In July 2015, DuPont spun off Chemours Co. and transferred to Chemours Co. its “performance chemicals” business line, which includes its fluoroproducts business, distributing shares of Chemours Co. stock to DuPont stockholders, and Chemours Co. has since been an independent, publicly-traded company.

64. **Defendant The Chemours Company FC, LLC (“Chemours FC”)** is a limited liability company organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, Wilmington, Delaware, 19899.

65. **Defendant Corteva, Inc. (“Corteva”)** is a corporation organized and existing under the laws of Delaware, with its principal place of business at 974 Centre Rd., Wilmington, Delaware 19805.

66. **Defendant Dupont de Nemours Inc. f/k/a DowDuPont, Inc. (“Dupont de Nemours Inc.”)** is a corporation organized and existing under the laws of Delaware, with its principal place of business at 974 Centre Road, Wilmington, Delaware 19805 and 2211 H.H. Dow Way, Midland, Michigan 48674.

67. On June 1, 2019, DowDuPont separated its agriculture business through the spin-off of Corteva.

68. Corteva was initially formed in February 2018. From that time until June 1, 2019, Corteva was a wholly-owned subsidiary of DowDuPont.

69. On June 1, 2019, DowDuPont distributed to DowDuPont stockholders all issued and outstanding shares of Corteva common stock by way of a pro-rata dividend. Following that distribution, Corteva became the direct parent of E. I. Du Pont de Nemours & Co.

70. Corteva holds certain DowDuPont assets and liabilities, including DowDuPont’s agriculture and nutritional businesses.

71. On June 1, 2019, DowDuPont, the surviving entity after the spin-off of Corteva and of another entity known as Dow, Inc., changed its name to DuPont de Nemours, Inc., to be known as DuPont (“New DuPont”). New DuPont retained assets in the specialty products business lines following the above-described spin-offs, as well as the balance of the financial assets and liabilities of E.I DuPont not assumed by Corteva.

72. Defendants E. I. Du Pont de Nemours and Company; The Chemours Company; The Chemours Company FC, LLC; Corteva, Inc.; and DuPont de Nemours, Inc. are collectively referred to as “DuPont” throughout this Complaint.

73. On information and belief, DuPont designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

74. On information and belief, 3M and Chemguard also designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

75. On information and belief, the Fluorosurfactant Defendants designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed at the Sites.

iii. The PFC Defendants

76. The term “**PFC Defendants**” refers collectively to 3M, AGC Chemicals Americas Inc., Archroma U.S. Inc., ChemDesign Products Inc., Chemicals, Inc., Clariant Corporation, Deepwater Chemicals, Inc., E. I. DuPont de Nemours and Company, The Chemours Company, The Chemours Company FC, LLC, Corteva, Inc., DuPont de Nemours Inc., and Nation Ford Chemical Company.

77. **Defendant AGC Chemicals Americas, Inc. (“AGC”)** is a corporation organized and existing under the laws of Delaware, having its principal place of business at 55 East Uwchlan Avenue, Suite 201, Exton, PA 19341.

78. On information and belief, AGC Chemicals Americas, Inc. was formed in 2004 and is a subsidiary of AGC Inc., a foreign corporation organized under the laws of Japan, with its a principal place of business in Tokyo, Japan.

79. AGC manufactures specialty chemicals. It offers glass, electronic displays, and chemical products, including resins, water and oil repellants, greenhouse films, silica additives, and various fluorointermediates.

80. On information and belief, AGC designed, manufactured, marketed, distributed, and sold PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

81. **Defendant Archroma U.S., Inc. (“Archroma”)** is a corporation organized and existing under the laws of Delaware, with its a principal place of business at 5435 77 Center Drive, Charlotte, North Carolina 28217.

82. On information and belief, Archroma was formed in 2013 when Clariant Corporation divested its textile chemicals, paper specialties, and emulsions business to SK Capital Partners.

83. On information and belief, Archroma designed, manufactured, marketed, distributed, and sold PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

84. **Defendant Chemicals, Inc. (“Chemicals, Inc.”)** is a corporation organized and existing under the laws of Texas, with its principal place of business located at 12321 Hatcherville, Baytown, TX 77520.

85. On information and belief, Chemicals, Inc. supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

86. **Defendant Clariant Corporation (“Clariant”)** is a corporation organized and existing under the laws of New York, with its principal place of business at 4000 Monroe Road, Charlotte, North Carolina 28205.

87. On information and belief, Clariant is the successor in interest to the specialty chemicals business of Sandoz Chemical Corporation (“Sandoz”). On information and belief, Sandoz spun off its specialty chemicals business to form Clariant in 1995.

88. On information and belief, Clariant supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

89. **Defendant Nation Ford Chemical Co. (“Nation Ford”)** is a corporation organized and existing under the laws of South Carolina, with its principal place of business located at 2300 Banks Street, Fort Mill, SC 29715.

90. On information and belief, Nation Ford supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

91. On information and belief, 3M, ChemDesign, Deepwater Chemicals, and DuPont also supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.



92. On information and belief, the Fluorochemical Defendants supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed at the Sites.

iv. Doe Defendants 1-20

93. Doe Defendants 1-20 are unidentified entities or persons whose names are presently unknown and whose actions, activities, omissions (a) may have permitted, caused and/or contributed to the contamination of Plaintiff's water sources or supply wells; or (b) may be vicariously responsible for entities or persons who permitted, caused and/or contributed to the contamination of Plaintiff's water sources or supply wells; or (c) may be successors in interest to entities or persons who permitted, caused and/or permitted , contributed to the contamination of Plaintiff's water sources or supply wells. After reasonable search and investigation to ascertain the Doe Defendants actual names, the Doe Defendants' actual identities are unknown to Plaintiff as they are not linked with any of the Defendants on any public source.

94. The Doe Defendants 1-20 either in their own capacity or through a party they are liable for: (1) designed, manufactured, marketed, distributed, and/or sold AFFF products containing PFOS, PFOA, and/or their chemical precursors, and/or designed, manufactured, marketed, distributed, and/or sold the fluorosurfactants and/or PFCs contained in AFFF/Component Products; or (2) used, handled, transported, stored, discharged, disposed of, designed, manufactured, marketed, distributed, and/or sold PFOS, PFOA, and/or their chemical precursors, or other non-AFFF products containing PFOS, PFOA, and/or their chemical precursors; or (3) failed to timely perform necessary and reasonable response and remedial measures to releases of PFOS, PFOA, and/or their chemical precursors, or other non-AFFF products containing PFOS, PFOA, and/or their chemical precursors in to the environment.

95. All Defendants, at all times material herein, acted by and through their respective agents, servants, officers and employees, actual or ostensible, who then and there were acting within the course and scope of their actual or apparent agency, authority or duties. Defendants are liable based on such activities, directly and vicariously.

96. Defendants represent all or substantially all of the market for AFFF/Component Products at the Sites.

**FACTUAL ALLEGATIONS RELEVANT TO ALL CAUSES OF ACTION**

**A. PFOA and PFOS and Their Risk to Public Health**

97. PFAS are chemical compounds containing fluorine and carbon. These substances have been used for decades in the manufacture of, among other things, household and commercial products that resist heat, stains, oil, and water. These substances are not naturally occurring and must be manufactured.

98. The two most widely studied types of these substances are PFOA and PFOS.

99. PFOA and PFOS have unique properties that cause them to be: (i) mobile and persistent, meaning that they readily spread into the environment where they break down very slowly; (ii) bioaccumulative and biomagnifying, meaning that they tend to accumulate in organisms and up the food chain; and (iii) toxic, meaning that they pose serious health risks to humans and animals.

100. PFOA and PFOS easily dissolve in water, and thus they are mobile and easily spread in the environment. PFOA and PFOS also readily contaminate soils and leach from the soil into groundwater, where they can travel significant distances.

101. PFOA and PFOS are characterized by the presence of multiple carbon-fluorine bonds, which are exceptionally strong and stable. As a result, PFOA and PFOS are thermally,

chemically, and biologically stable. They resist degradation due to light, water, and biological processes.

102. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than the rate at which the substance is lost by metabolism and excretion. Biomagnification occurs when the concentration of a substance in the tissues of organisms increases as the substance travels up the food chain.

103. PFOA and PFOS bioaccumulate/biomagnify in numerous ways. First, they are relatively stable once ingested, so that they bioaccumulate in individual organisms for significant periods of time. Because of this stability, any newly ingested PFOA and PFOS will be added to any PFOA and PFOS already present. In humans, PFOA and PFOS remain in the body for years.

104. PFOA and PFOS biomagnify up the food chain. This occurs, for example, when humans eat fish that have ingested PFOA and/or PFOS.

105. The chemical structure of PFOA and PFOS makes them resistant to breakdown or environmental degradation. As a result, they are persistent when released into the environment.

106. Exposure to PFAS is toxic and poses serious health risks to humans and animals.

107. PFAS are readily absorbed after consumption or inhalation and accumulate primarily in the bloodstream, kidney, and liver.

## **II. Defendants' Manufacture and Sale of AFFF/Component Products**

108. AFFF is a type of water-based foam that was first developed in the 1960s to extinguish hydrocarbon fuel-based fires.

109. AFFF is a Class-B firefighting foam. It is mixed with water and used to extinguish fires that are difficult to fight, particularly those that involve petroleum or other flammable liquids.

110. AFFF is synthetically formed by combining fluorine-free hydrocarbon foaming agents with fluorosurfactants. When mixed with water, the resulting solution produces an aqueous

film that spreads across the surface of hydrocarbon fuel. This film provides fire extinguishment and is the source of the designation aqueous film-forming foam.

111. Beginning in the 1960s, the AFFF Defendants designed, manufactured, marketed, distributed, and/or sold AFFF products that used fluorosurfactants containing either PFOS, PFOA, or the chemical precursors that degrade into PFOS and PFOA.

112. AFFF can be made without the fluorosurfactants that contain PFOA, PFOS, and/or their precursor chemicals. Fluorine-free firefighting foams, for instance, do not release PFOA, PFOS, and/or their precursor chemicals into the environment.

113. AFFF that contains fluorosurfactants, however, is better at extinguishing hydrocarbon fuel-based fires due to their surface-tension lowering properties, essentially smothering the fire and starving it of oxygen.

114. The fluorosurfactants used in 3M's AFFF products were manufactured by 3M's patented process of electrochemical fluorination ("ECF").

115. The fluorosurfactants used in other AFFF products sold by the AFFF Defendants were manufactured by the Fluorosurfactant Defendants through the process of telomerization.

116. The PFCs the Fluorosurfactant Defendants needed to manufacture those fluorosurfactants contained PFOS, PFOA, and/or their chemical precursors and were designed, manufactured, marketed, distributed and/or sold by the PFC Defendants.

117. On information and belief, the PFC and Fluorosurfactant Defendants were aware that the PFCs and fluorosurfactants they designed, manufactured, marketed, distributed, and/or sold would be used in the AFFF products designed, manufactured, marketed, distributed, and/or sold by the AFFF Defendants.

118. On information and belief, the PFC and Fluorosurfactant Defendants designed, manufactured, marketed, distributed, and/or sold the PFC and/or fluorosurfactants contained in the AFFF products discharged into the environment at the Site during fire protection, training, and response activities, resulting in widespread PFAS contamination.

119. On information and belief, the AFFF Defendants designed, manufactured, marketed, distributed, and/or sold the AFFF products discharged into the environment at the Site during fire protection, training, and response activities, resulting in widespread PFAS contamination.

**III. Defendants' Knowledge of the Threats to Public Health and the Environment Posed by PFOS and PFOA**

120. On information and belief, by at least the 1970s 3M and DuPont knew or should have known that PFOA and PFOS are mobile and persistent, bioaccumulative and biomagnifying, and toxic.

121. On information and belief, 3M and DuPont concealed from the public and government agencies its knowledge of the threats to public health and the environment posed by PFOA and PFOS.

122. Some or all of the Defendants understood how stable the fluorinated surfactants used in AFFF are when released into the environment from their first sale to a customer, yet they failed to warn their customers or provide reasonable instruction on how to manage wastes generated from their products.

i. 1940s and 1950s: Early Warnings About the Persistence of AFFF

123. In 1947, 3M started its fluorochemical program, and within four years, it began selling its PFOA to DuPont. The persistence and contaminating nature of the fluorosurfactants

contained in AFFF products were understood prior to their commercial application at 3M's Cottage Grove facility in Minnesota.

124. The inventor of 3M's ECF process was J.H. Simons. Simons' 1948 patent for the ECF process reported that PFCs are "non-corrosive, and of little chemical reactivity," and "do not react with any of the metals at ordinary temperatures and react only with the more chemically reactive metals such as sodium, at elevated temperatures."<sup>1</sup>

125. Simons further reported that fluorosurfactants produced by the ECF process do not react with other compounds or reagents due to the blanket of fluorine atoms surrounding the carbon skeleton of the molecule. 3M understood that the stability of the carbon-to-fluorine bonds prevented its fluorosurfactants from undergoing further chemical reactions or degrading under natural processes in the environment.<sup>2</sup>

126. The thermal stability of 3M's fluorosurfactants was also understood prior to commercial production. Simons' patent application further discloses that the fluorosurfactants produced by the ECF process were thermally stable at temperatures up to 750° C (1382° F). Additional research by 3M expanded the understanding of the thermal stability of perfluorocarbon compounds.<sup>3</sup>

127. Nowhere in any Material Safety Data Sheet for any of Defendants' AFFF/Component Products is information on the thermal stability of those products disclosed. Failure to disclose knowledge of the stability of the PFCs and fluorosurfactants used in AFFF

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<sup>1</sup> Simons, J. H., Fluorination of Organic Compounds, U.S. Patent No. 2,447,717. August 24, 1948, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1005.pdf>.

<sup>2</sup> Simons, J. H., 1950. Fluorocarbons and Their Production. Fluorine Chemistry, 1(12): 401-422, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3008.pdf>.

<sup>3</sup> Bryce, T. J., 1950. Fluorocarbons - Their Properties and Wartime Development. Fluorine Chemistry, 1(13): 423-462.

products to customers is a failure to warn just how indestructible the AFFF's ingredients are when released to unprotected water sources and even treatment plants.

ii. 1960s: AFFF's Environmental Hazards Come into Focus

128. By at least the end of the 1960s, additional research and testing performed by 3M and DuPont indicated that fluorosurfactants, including at least PFOA, because of their unique chemical structure, were resistant to environmental degradation and would persist in the environment essentially unaltered if allowed to enter the environment.

129. One 3M employee wrote in 1964: "This chemical stability also extends itself to all types of biological processes; there are no known biological organisms that are able to attack the carbon-fluorine bond in a fluorocarbon."<sup>4</sup> Thus, 3M knew by the mid-1960s that its surfactants were immune to chemical and biological degradation in soils and groundwater.

130. 3M also knew by 1964 that when dissolved, fluorocarbon carboxylic acids and fluorocarbon sulfonic acids dissociated to form highly stable perfluorocarboxylate and perfluorosulfonate ions. Later studies by 3M on the adsorption and mobility of FC-95 and FC-143 (the ammonium salt of PFOA) in soils indicated very high solubility and very high mobility in soils for both compounds.<sup>5</sup>

iii. 1970s: Internal Studies Provide Evidence of Environmental and Health Risks

131. By 1950, 3M knew that the fluorosurfactants used in its AFFF product(s) would not degrade when released to the environment, but would remain intact and persist. Two decades

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<sup>4</sup> Bryce, H.G., Industrial and Utilitarian Aspects of Fluorine Chemistry (1964), *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3022.pdf>.

<sup>5</sup> Technical Report Summary re : Adsorption of FC 95 and FC143 on Soil, Feb. 27, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1158.pdf>.

later—and after the establishment of a robust market of AFFFs using fluorosurfactants—3M finally got around to looking at the environmental risks that fluorosurfactants posed.

132. An internal memo from 3M in 1971 states that “the thesis that there is ‘no natural sink’ for fluorocarbons obviously demands some attention.”<sup>6</sup> Hence, 3M understood at the very least that the fluorosurfactant used in its AFFF products would, in essence, never degrade once it was released into the environment.

133. By the mid-1970s, 3M and Ansul (and possibly other Defendants) had an intimate understanding of the persistent nature of PFCs. A 1976 study, for example, observed no biodegradation of FC-95, the potassium salt of PFOS; a result 3M characterized as “unsurprising” in light of the fact that “[b]iodegradation of FC 95 is improbable because it is completely fluorinated.”<sup>7</sup>

134. In 1977, Ansul authored a report titled “Environmentally Improved AFFF,” which acknowledged that releasing AFFF into the environment could pose potential negative impacts to groundwater quality.<sup>8</sup> Ansul wrote: “The purpose of this work is to explore the development of experimental AFFF formulations that would exhibit reduced impact on the environment while retaining certain fire suppression characteristic . . . improvements [to AFFF formulations] are desired in the environmental area, i.e., development of compositions that have a reduced impact on the environment without loss of fire suppression effectiveness.” Thus, Ansul knew by the mid-1970s that the environmental impact of AFFF needed to be reduced, yet there is no evidence that Ansul (or any other Defendant) ever pursued initiatives to do so.

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<sup>6</sup> Memorandum from H.G. Bryce to R.M. Adams re : Ecological Aspects of Fluorocarbons, Sept. 13, 1971, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1088.pdf>.

<sup>7</sup> Technical Report Summary, August 12, 1976 [3MA01252037].

<sup>8</sup> Ansul Co., Final Report: Environmentally Improved AFFF, N00173-76-C-0295, Marinette, WI, Dec. 13, 1977, *available at* <https://apps.dtic.mil/dtic/tr/fulltext/u2/a050508.pdf>.



135. A 1978 3M biodegradation study likewise reported that an “extensive study strongly suggest[ed]” one of its PFCs is “likely to persist in the environment for extended period unaltered by metabolic attack.”<sup>9</sup> A year later, a 3M study reported that one of its fluorosurfactants “was found to be completely resistant to biological test conditions,” and that it appeared waterways were the fluorosurfactant’s “environmental sink.”<sup>10</sup>

136. In 1979, 3M also completed a comprehensive biodegradation and toxicity study covering investigations between 1975 and 1978.<sup>11</sup> More than a decade after 3M began selling AFFF containing fluorosurfactants it wrote: “there has been a general lack of knowledge relative to the environmental impact of these chemicals.” The report ominously asked, “If these materials are not biodegradable, what is their fate in the environment?”

137. During the 1970s, 3M also learned that the fluorosurfactants used in AFFF accumulated in the human body and were “even more toxic” than previously believed.

138. In 1975, 3M learns that PFAS was present in the blood of the general population.<sup>12</sup> Since PFOA and PFOS are not naturally occurring, this finding should have alerted 3M to the possibility that their products were a source of this PFOS. The finding also should have alerted 3M to the possibility that PFOS might be mobile, persistent, bioaccumulative, and biomagnifying, as those characteristics could explain how PFOS from 3M's products ended up in human blood.

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<sup>9</sup> Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - II, Jan. 1, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1153.pdf>.

<sup>10</sup> Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - III, July 19, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1179.pdf>.

<sup>11</sup> Technical Report Summary, Final Comprehensive Report on FM 3422, Feb. 2, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2563.pdf>.

<sup>12</sup> Memorandum from G.H. Crawford to L.C. Krogh et al. re: Fluorocarbons in Human Blood Plasma, Aug. 20, 1975, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1118.pdf>.

139. In 1976, 3M found PFAS in the blood of its workers at levels “up to 1000 times ‘normal’ amounts of organically bound fluorine in their blood.”<sup>13</sup> This finding should have alerted 3M to the same issues raised by the prior year’s findings.

140. Studies by 3M in 1978 showed that PFOA reduced the survival rate of fathead minnow fish eggs,<sup>14</sup> that PFOS was toxic to monkeys,<sup>15</sup> and that PFOS and PFOA were toxic to rats.<sup>16</sup> In the study involving monkeys and PFOS, all of the monkeys died within days of ingesting food contaminated with PFOS.

141. In 1979, 3M and DuPont discussed 3M’s discovery of PFOA in the blood of its workers and came to the same conclusion that there was “no reason” to notify the EPA of the finding.<sup>17</sup>

iv. 1980s and 1990s: Evidence of AFFF’s Health Risks Continues to Mount

142. By at least the end of the 1980s, additional research and testing performed by Defendants, including at least 3M and DuPont, indicated that elevated incidence of certain cancers and other adverse health effects, including elevated liver enzymes and birth defects, had been observed among workers exposed to such materials, including at least PFOA, but such data was

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<sup>13</sup> 3M Chronology – Fluorochemicals in Blood, Aug. 26, 1977, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1144.pdf>.

<sup>14</sup> The Effects of Continuous Aqueous Exposure to 78.03 on Hatchability of Eggs and Growth and Survival of Fry of Fathead Minnow, June 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1176.pdf>.

<sup>15</sup> Ninety-Day Subacute Rhesus Monkey Toxicity Study, Dec. 18, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1191.pdf>; Aborted FC95 Monkey Study, Jan. 2, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1193.pdf>.

<sup>16</sup> Acute Oral Toxicity (LD<sub>50</sub>) Study in Rats (FC-143), May 5, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1170.pdf>; FC-95, FC-143 and FM-3422 – 90 Day Subacute Toxicity Studies Conducted at IRDC – Review of Final Reports and Summary, Mar. 20, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1199.pdf>.

<sup>17</sup> Memorandum from R.A. Prokop to J.D. Lazerte re: Disclosure of Information on Levels of Fluorochemicals in Blood, July 26, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2723.pdf>.

not published, provided to governmental entities as required by law, or otherwise publicly disclosed at the time.

143. In 1981, DuPont tested for and found PFOA in the blood of female plant workers Parkersburg, West Virginia. DuPont observed and documented pregnancy outcomes in exposed workers, finding two of seven children born to female plant workers between 1979 and 1981 had birth defects—one an “unconfirmed” eye and tear duct defect, and one a nostril and eye defect.<sup>18</sup>

144. In 1983, 3M researchers concluded that concerns about PFAS “give rise to concern for environmental safety,” including “legitimate questions about the persistence, accumulation potential, and ecotoxicity of fluorochemicals in the environment.”<sup>19</sup> That same year, 3M completed a study finding that PFOS caused the growth of cancerous tumors in rats.<sup>20</sup> This finding was later shared with DuPont and led them to consider whether “they may be obliged under their policy to call FC-143 a carcinogen in animals.”<sup>21</sup>

145. In 1984, 3M documented a trend of increasing levels of PFOS in the bodies of 3M workers, leading one of the company’s medical officers to warn in an internal memo: “we must view this present trend with serious concern. It is certainly possible that . . . exposure opportunities are providing a potential uptake of fluorochemicals that exceeds excretion capabilities of the body.”<sup>22</sup>

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<sup>18</sup> C-8 Blood Sampling Results, *available at* <http://tiny.cc/v8z1mz>.

<sup>19</sup> 3M Environmental Laboratory (EE & PC), Fate of Fluorochemicals - Phase II, May 20, 1983, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1284.pdf>.

<sup>20</sup> Two Year Oral (Diet) Toxicity/Carcinogenicity Study of Fluorochemical FC-143 in Rats, Volume 1 of 4, Aug. 29, 1987, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1337.pdf>.

<sup>21</sup> Memorandum from R.G. Perkins to F.D. Griffith re: Summary of the Review of the FC-143 Two-Year Feeder Study Report to be presented at the January 7, 1988 meeting with DuPont, January 5, 1988, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1343.pdf>.

<sup>22</sup> Memorandum from D.E. Roach to P.F. Riehle re: Organic Fluorine Levels, Aug. 31, 1984, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1313.pdf>.

146. A 1997 material safety data sheet (“MSDS”) for a non-AFFF product made by 3M listed its only ingredients as water, PFOA, and other perfluoroalkyl substances and warned that the product includes “a chemical which can cause cancer.” The MSDS cited “1983 and 1993 studies conducted jointly by 3M and DuPont” as support for this statement. On information and belief, the MSDS for 3M’s AFFF products did not provide similar warnings or information.

v. Defendants Hid What They Knew from the Government and the Public.

147. Federal law requires chemical manufacturers and distributors to immediately notify the EPA if they have information that “reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment.” Toxic Substances Control Act (“TSCA”) § 8(e), 15 U.S.C. § 2607(e)

148. In April 2006, 3M agreed to pay EPA a penalty of more than \$1.5 million after being cited for 244 violations of the TSCA, which included violations for failing to disclose studies regarding PFOS, PFOA, and other PFCs dating back decades.

149. Likewise, in December 2005, the EPA announced it was imposing the “Largest Environmental Administrative Penalty in Agency History” against DuPont based on evidence that it violated the TSCA by concealing the environmental and health effects of PFOA.

150. On information and belief, Defendants knew or should have known that AFFF containing PFOA or PFOS would very likely injure and/or threaten public health and the environment, even when used as intended or directed.

151. Defendants failed to warn of these risks to the environment and public health, including the impact of their AFFF/Component Products on the quality of unprotected water sources.

152. Defendants were all sophisticated and knowledgeable in the art and science of designing, formulating, and manufacturing AFFF/Component Products. They understood far more

about the properties of their AFFF/Component Products—including the potential hazards they posed to human health and the environment—than any of their customers. Still, Defendants declined to use their sophistication and knowledge to design safer products.

#### **IV. The Impact of PFOS and PFOA on the Environment and Human Health Is Finally Revealed**

153. As discussed above, neither 3M, DuPont, nor, on information and belief, any other Defendant complied with their obligations to notify EPA about the “substantial risk of injury to health or the environment” posed by their AFFF/Component Products. *See* TSCA § 8(e).

154. Despite decades of research, 3M first shared its concerns with EPA in the late 1990s. In a May 1998 report submitted to EPA, “3M chose to report simply that PFOS had been found in the blood of animals, which is true but omits the most significant information,” according to a former 3M employee.<sup>23</sup>

155. On information and belief, 3M began in 2000 to phase out its production of products that contained PFOS and PFOA in response to pressure from the EPA.

156. Once the truth about PFOS and PFOA was revealed, researchers began to study the environmental and health effects associated with them, including a “C8 Science Panel” formed out of a class action settlement arising from contamination from DuPont’s Washington Works located in Wood County, West Virginia.

157. The C8 panel consisted of three epidemiologists specifically tasked with determining whether there was a probable link between PFOA exposure and human diseases. In 2012, the panel found probable links between PFOA and kidney cancer, testicular cancer,

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<sup>23</sup> Letter from R. Purdy, Mar. 28, 1999, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1001.pdf>.

ulcerative colitis, thyroid disease, pregnancy-induced hypertension (including preeclampsia), and hypercholesterolemia.

158. Human health effects associated with PFOS exposure include immune system effects, changes in liver enzymes and thyroid hormones, low birth weight, high uric acid, and high cholesterol. In laboratory testing on animals, PFOA and PFOS have caused the growth of tumors, changed hormone levels, and affected the function of the liver, thyroid, pancreas, and immune system.

159. The injuries caused by PFAS can arise months or years after exposure.

160. Even after the C8 Science Panel publicly announced that human exposure to 50 parts per trillion, or more, of PFOA in drinking water for one year or longer had “probable links” with certain human diseases, including kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, preeclampsia, and medically-diagnosed high cholesterol, Defendants repeatedly assured and represented to governmental entities, their customers, and the public (and continue to do so) that the presence of PFOA in human blood at the levels found within the United States presents no risk of harm and is of no legal, toxicological, or medical significance of any kind.

161. Furthermore, Defendants have represented to and assured such governmental entities, their customers, and the public (and continue to do so) that the work of the independent C8 Science Panel was inadequate to satisfy the standards of Defendants to prove such adverse effects upon and/or any risk to humans with respect to PFOA in human blood.

162. At all relevant times, Defendants, through their acts and/or omissions, controlled, minimized, trivialized, manipulated, and/or otherwise influenced the information that was published in peer-review journals, released by any governmental entity, and/or otherwise made available to the public relating to PFAS in human blood and any alleged adverse impacts and/or

risks associated therewith, effectively preventing the public from discovering the existence and extent of any injuries/harm as alleged herein.

163. On May 2, 2012, the EPA published its Third Unregulated Contaminant Monitoring Rule (“UCMR3”), requiring public water systems nationwide to monitor for thirty contaminants of concern between 2013 and 2015, including PFOS and PFOA.<sup>24</sup>

164. In the May 2015 “Madrid Statement on Poly- and Perfluoroalkyl Substances (PFAS’s),” scientists and other professionals from a variety of disciplines, concerned about the production and release into the environment of PFOA, called for greater regulation, restrictions, limits on the manufacture and handling of any PFOA containing product, and to develop safe non-fluorinated alternatives to these products to avoid long-term harm to human health and the environment.<sup>25</sup>

165. On May 25, 2016, the EPA released a lifetime health advisory (HAs) and health effects support documents for PFOS and PFOA.<sup>26</sup> See Fed. Register, Vol. 81, No. 101, May 25, 2016. The EPA developed the HAs to assist governmental officials in protecting public health when PFOS and PFOA are present in drinking water. The EPA HAs identified the concentration of PFOS and PFOA in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure at 0.07 ppb or 70 ppt. The HAs were based on peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations exposed to PFOS. These studies

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<sup>24</sup> *Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems*, 77 Fed. Reg. 26072 (May 2, 2012).

<sup>25</sup> Blum A, Balan SA, Scheringer M, Trier X, Goldenman G, Cousins IT, Diamond M, Fletcher T, Higgins C, Lindeman AE, Peaslee G, de Voogt P, Wang Z, Weber R. 2015. The Madrid statement on poly- and perfluoroalkyl substances (PFASs). *Environ Health Perspect* 123:A107–A111; <http://dx.doi.org/10.1289/ehp.1509934>.

<sup>26</sup> See Fed. Register, Vol. 81, No. 101, May 25, 2016, Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate.

indicate that exposure to PFOS and PFOA over these levels may result in adverse health effects, including:

- a. Developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations);
- b. Cancer (testicular and kidney);
- c. Liver effects (tissue damage);
- d. Immune effects (e.g., antibody production and immunity);
- e. Thyroid disease and other effects (e.g., cholesterol changes).

166. In addition, PFOS and PFOA are hazardous materials because they pose a “present or potential threat to human health.”<sup>27</sup>

167. In 2016, the National Toxicology Program of the United States Department of Health and Human Services (“NTP”) and the International Agency for Research on Cancer (“IARC”) both released extensive analyses of the expanding body of research regarding the adverse effects of PFCs. The NTP concluded that both PFOA and PFOS are “presumed to be an immune hazard to humans” based on a “consistent pattern of findings” of adverse immune effects in human (epidemiology) studies and “high confidence” that PFOA and PFOS exposure was associated with suppression of immune responses in animal (toxicology) studies.<sup>28</sup>

168. IARC similarly concluded that there is “evidence” of “the carcinogenicity of . . . PFOA” in humans and in experimental animals, meaning that “[a] positive association has been

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<sup>27</sup> *Id.*; see also *National Ass'n for Surface Finishing v. EPA*, 795 F.3d 1, 3, 6 (D.C. Cir. 2015) (referring to PFOS as a “toxic compound” and a “hazardous chemical.”).

<sup>28</sup> See U.S. Dep’t of Health and Human Services, Nat’l Toxicology Program, *NTP Monograph: Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid or Perfluorooctane Sulfonate* (Sept. 2016), at 1, 17, 19, available at [https://ntp.niehs.nih.gov/ntp/ohat/pfoa\\_pfos/pfoa\\_pfosmonograph\\_508.pdf](https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf)



observed between exposure to the agent and cancer for which a causal interpretation is . . . credible.”<sup>29</sup>

169. California has listed PFOA and PFOS to its Proposition 65 list as a chemical known to cause reproductive toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986.<sup>30</sup>

170. The United States Senate and House of Representatives passed the National Defense Authorization Act in November 2017, which included \$42 Million to remediate PFC contamination from military bases, as well as devoting \$7 Million toward the Investing in Testing Act, which authorizes the Center for Disease Control and Prevention (“CDC”) to conduct a study into the long-term health effects of PFOA and PFOS exposure.<sup>31</sup> The legislation also required that the Department of Defense submit a report on the status of developing a new military specification for AFFF that did not contain PFOS or PFOA.<sup>32</sup>

171. In June 2018, the Agency for Toxic Substances and Disease Registry (“ATSDR”) and EPA released a draft toxicological profile for PFOS and PFOA and recommended the drinking water advisory levels be lowered to 11 ppt for PFOA and 7 ppt for PFOS.<sup>33</sup>

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<sup>29</sup> See Int’l Agency for Research on Cancer, IARC Monographs: *Some Chemicals Used as Solvents and in Polymer Manufacture* (Dec. 2016), at 27, 97, available at <http://monographs.iarc.fr/ENG/Monographs/vol110/mono110.pdf>.

<sup>30</sup> California Office of Environmental Health Hazard Assessment, *Chemicals Listed Effective Nov. 10, 2017 as Known to the State of California to Cause Reproductive Toxicity: Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS)*, Nov. 9, 2017, available at <https://oehha.ca.gov/proposition-65/crn/chemicals-listed-effective-november-10-2017-known-state-california-cause>.

<sup>31</sup> National Defense Authorization Act for Fiscal Year 2018, H.R. 2810, 115th Congress (2017), available at <https://www.congress.gov/115/plaws/publ91/PLAW-115publ91.pdf>.

<sup>32</sup> *Id.*; see also U.S. Department of Defense, *Alternatives to Aqueous Film Forming Foam Report to Congress*, June 2018, available at <https://www.denix.osd.mil/derp/home/documents/alternatives-to-aqueous-film-forming-foam-report-to-congress/>.

<sup>33</sup> ATSDR, *Toxicological Profile for Perfluoroalkyls: Draft for Public Comment* (June 2018), available at <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

172. On February 20, 2020, the EPA announced a proposed decision to regulate PFOA and PFOS under the Safe Drinking Water Act, which the agency characterized as a “key milestone” in its efforts to “help communities address per- and polyfluoroalkyl substances (PFAS) nationwide.”<sup>34</sup> Following a public comment period on its proposed decision, the EPA will decide whether to move forward with the process of establishing a national primary drinking water regulation for PFOA and PFOS.

**V. AFFF Containing PFOS and PFOA Is Fungible and Commingled in the Groundwater**

173. AFFF containing PFOS and/or PFOA, once it has been released to the environment, lacks characteristics that would enable identification of the company that manufactured that particular batch of AFFF or chemical feedstock.

174. A subsurface plume, even if it comes from a single location, such as a retention pond or fire training area, originates from mixed batches of AFFF and chemical feedstock coming from different manufacturers.

175. Because precise identification of the specific manufacturer of any given AFFF/Component Product that was a source of the PFAS found at Reese Air Force Base, during fire protection, training, and response activities, resulting in widespread PFAS contamination is nearly impossible, given certain exceptions, Plaintiffs must pursue all Defendants, jointly and severally.

176. Defendants are also jointly and severally liable because they conspired to conceal the true toxic nature of PFOS and PFOA, to profit from the use of AFFF/Component Products containing PFOS and PFOA, at Plaintiffs’ expense, and to attempt to avoid liability.

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<sup>34</sup> Press Release, *EPA Announces Proposed Decision to Regulate PFOA and PFOS in Drinking Water*, Feb. 20, 2020, available at <https://www.epa.gov/newsreleases/epa-announces-proposed-decision-regulate-pfoa-and-pfos-drinking-water>.

**MARKET SHARE LIABILITY, ALTERNATIVE LIABILITY,  
CONCERT OF ACTION, AND ENTERPRISE LIABILITY**

177. Defendants in this action are manufacturers that control a substantial share of the market for AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors in the United States and are jointly responsible for the contamination of the groundwater at the Site, affecting groundwater sources within the vicinity of the base. Market share liability attaches to all Defendants and the liability of each should be assigned according to its percentage of the market for AFFF/Component Products at issue in this Complaint.

178. Because PFAS is fungible, it is impossible to identify the exact Defendant who manufactured any given AFFF/Component Product containing PFOS, PFOA, and/or their chemical precursors found free in the air, soil or groundwater, and each of these Defendants participated in a territory-wide and U.S. national market for AFFF/Component Products during the relevant time.

179. Concert of action liability attaches to all Defendants, each of which participated in a common plan to commit the torts alleged herein and each of which acted tortuously in pursuance of the common plan to knowingly manufacture and sell inherently dangerous AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors.

180. Enterprise liability attaches to all the named Defendants for casting defective products into the stream of commerce.

**CONSPIRACY**

181. Defendants actually knew of the health and environmental hazards which PFOA and PFOS posed to Plaintiffs.

182. Beginning in the 1970s and continuing through the date of this Complaint, Defendants formed joint task forces, committees and otherwise colluded for the avowed purpose

of providing information about AFFF/Component Products containing PFOA and/or PFOS to the public and to government agencies with the unlawful purpose of:

- a. Creating a market for AFFF/Component Products containing PFOA and/or PFOS despite knowledge of the hazards which PFOA and PFOS posed to the groundwater and the residents who depend on such water;
- b. Concealing the environmental properties and toxic nature of PFOA and PFOS, and its impact on Plaintiffs and the environment; and
- c. Maximizing profits in a way Defendants knew or should have known would result in the contamination of Plaintiffs.

183. Defendants carried out their conspiracy by one or more of the following overt acts or omissions:

- a. Intentionally representing to the DOD, USAF, USEPA and the public that AFFF/Component Products containing PFOA and PFOS were safe and did not pose an environmental or human health risk;
- b. Concealing the dangers of PFOA and PFOS (including toxicological information on the dangers of the chemicals to living organisms, adverse fate and transport characteristics, and the propensity of PFOA and PFOS to contaminate groundwater) from the government and the public by, among other means, repeatedly requesting that information about the dangers and health effects of PFOA and PFOS be suppressed and not otherwise published, and by downplaying any adverse findings relating to PFOA and PFOS;

- c. Concealing the dangers of AFFF/Component Products containing PFOA and PFOS from end users, sensitive receptors, public water suppliers, and the users and consumers of groundwater;
  - d. Using their considerable resources to fight PFOA and PFOS regulation; and
  - e. Collectively deciding to use PFOA and/or PFOS rather than other, safer surfactants because AFFF/Component Products containing PFOA and/or PFOS were the most profitable surfactant for Defendants to use.
184. As a direct and proximate result of the Defendants' above-described conspiracy, PFOA and PFOS, at all times relevant to this litigation has:
- a. Posed and continues to pose a health threat to Plaintiffs because it has bioaccumulated in their bodies;
  - b. Contaminated Plaintiffs' bodies with PFOA and/or PFOS; and
  - c. Created the need for remediation of PFOA- and PFOS- contaminated groundwater for those property owners who utilize private water wells, or, where remediation of the groundwater is impractical, installation of a system to filter out PFOA and PFOS or procurement of water from alternative sources;

**CAUSES OF ACTION**

**COUNT 1:**

**DEFECTIVE DESIGN**

185. Plaintiffs adopt, reallege, and incorporate the allegations in the preceding paragraphs and further alleges the following:

186. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants owed a duty to all persons whom its products might

foreseeably harm, including Plaintiffs, and not to market any product which is unreasonably dangerous in design for its reasonably anticipated used.

187. Defendants' AFFF/Component Products were unreasonably dangerous for its reasonably anticipated uses for the following reasons:

- a. PFAS causes extensive groundwater contamination, even when used in its foreseeable and intended manner;
- b. Even at extremely low levels, PFAS render drinking water unfit for consumption;
- c. PFAS poses significant threats to public health; and
- d. PFAS create real and potential environmental damage.

188. Defendants knew of these risks and failed to use reasonable care in the design of their AFFF/Component Products.

189. AFFF containing PFOS, PFOA, and/or their chemical precursors poses a greater danger to the environment and to human health than would be expected by ordinary persons such as Plaintiffs.

190. At all times, Defendants were capable of making AFFF/Component Products that did not contain PFOS, PFOA, and/or their chemical precursors. Thus, reasonable alternative designs existed which were capable of preventing Plaintiffs' injuries.

191. The risks posed by AFFF containing PFOS, PFOA, and/or their chemical precursors far outweigh the products' utility as a flame-control product.

192. As a direct and proximate result of Defendants' unreasonably dangerous design, manufacture, and sale of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Plaintiffs have been, and continues to be, contaminated with PFAS in varying amounts over time, causing Plaintiffs significant injuries and damages.

193. Defendants knew that it was substantially certain that their acts and omissions described above would injure Plaintiffs' with PFAS in varying amounts over time, causing Plaintiffs significant injuries and damages. Contamination that led to the exposure of Plaintiffs' to toxins and increased their risk of numerous diseases. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiffs' health and safety, and/or property rights.

**COUNT 2:**

**FAILURE TO WARN**

194. Plaintiffs adopt, reallege, and incorporate the allegations in the preceding paragraphs and further alleges the following:

195. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants had a duty to provide adequate warnings of the risks of these products to all persons whom its product might foreseeably harm, including Plaintiffs.

196. Defendants' AFFF/Component Products were unreasonably dangerous for its reasonably anticipated uses for the following reasons:

- a. PFAS causes extensive groundwater contamination, even when used in its foreseeable and intended manner;
- b. Even at extremely low levels, PFAS render drinking water unfit for consumption;
- c. PFAS poses significant threats to public health; and
- d. PFAS create real and potential environmental damage.

197. Defendants knew of the health and environmental risks associated with their AFFF/Component Products and failed to provide a warning that would lead an ordinary reasonable

user or handler of a product to contemplate the dangers associated with their products or an instruction that would have avoided Plaintiffs' injuries.

198. Despite Defendants' knowledge of the environmental and human health hazards associated with the use and/or disposal of their AFFF/Component Products in the vicinity of drinking water supplies, including PFAS contamination of the drinking supplies, Defendants failed to issue any warnings, instructions, recalls, or advice regarding their AFFF/Component Products to Plaintiff, governmental agencies or the public.

199. As a direct and proximate result of Defendants' failure to warn, Plaintiffs have been, and continue to be, contaminated with PFAS in varying amounts over time, causing Plaintiffs significant injuries and damages. Further, this contamination led to the exposure of Plaintiffs to toxins and increased their probabilities of numerous diseases as more fully set forth above.

200. Defendants knew that it was substantially certain that their acts and omissions described above would injure Plaintiffs with PFAS in varying amount, causing Plaintiffs significant injuries and damages. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiffs' health and safety, and/or property rights.

**COUNT 3:**  
**NEGLIGENCE**

201. Plaintiffs adopt, reallege, and incorporate the allegations in the preceding paragraphs and further alleges the following:

202. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants owed a duty to Plaintiffs and to all persons whom its products might foreseeably harm and to exercise due care in the formulation, manufacture, sale, labeling, warning, and use of PFAS-containing AFFF.



203. Defendants owed a duty to Plaintiffs to act reasonably and not place inherently dangerous AFFF/Component Products into the marketplace when its release into the air, soil, and water was imminent and certain.

204. Defendants knew or should have known that PFAS were leaching from AFFF used for fire protection, training, and response activities.

205. Defendants knew or should have known that PFAS are highly soluble in water, highly mobile, extremely persistent in the environment, and high likely to contaminate water supplies if released into the environment.

206. Defendants knew or should have known that the manner in which they were designing, manufacturing, marketing, distributing, and selling their AFFF/Component Products would result in contamination of Plaintiffs with PFAS in varying amounts over time, causing Plaintiffs significant injuries and damages.

207. Despite the fact that Defendants knew or should have known that PFAS are toxic, can contaminate water resources and are carcinogenic, Defendants negligently:

- a. designed, manufactured, formulated, handled, labeled, instructed, controlled, marketed, promoted, and/or sold AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors;
- b. issued deficient instructions on how their AFFF/Component Products should be used and disposed of, thereby permitting PFAS to contaminate the groundwater in and around the Site;
- c. failed to recall and/or warn the users of their AFFF/Component Products of the dangers of groundwater contamination as a result of standard use and disposal of their products;

- d. failed and refused to issue the appropriate warning and/or recalls to the users of their AFFF/Component Products; and
- e. failing to take reasonable, adequate, and sufficient steps or actions to eliminate, correct, or remedy any contamination after it occurred.

208. The magnitude of the burden on the Defendants to guard against this foreseeable harm to Plaintiffs was minimal, as the practical consequences of placing this burden on the Defendants amounted to a burden to provide adequate instructions, proper labeling, and sufficient warnings about their AFFF/Component Products.

209. As manufacturers, Defendants were in the best position to provide adequate instructions, proper labeling, and sufficient warnings about their AFFF/Component Products, and to take steps to eliminate, correct, or remedy any contamination they caused.

210. As a direct and proximate result of Defendants' negligence, Plaintiffs have been contaminated with PFAS, in varying amounts of time, causing Plaintiffs significant injuries and damages.

211. Defendants knew that it was substantially certain that their acts and omissions described above would cause Plaintiffs to be contaminated with PFAS in varying amounts over time, causing Plaintiffs significant injuries and damages. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiffs' health and safety, and/or property rights.

**COUNT 4:**  
**ACTUAL FRAUDULENT TRANSFER (DuPont and Chemours Co.)**

212. Plaintiffs adopt, reallege, and incorporate the allegations in the preceding paragraphs and further alleges the following:

213. Through their effectuation of the Spinoff, Chemours Co. and DuPont (the “Fraudulent Transfer Defendants”) caused Chemours Co. to transfer valuable assets to DuPont, including but not limited to the \$3.9 billion dividend (the “Transfers”), while simultaneously assuming significant liabilities (the “Assumed Liabilities”).

214. The Transfers and Assumed Liabilities were made for the benefit of DuPont.

215. At the time that the Transfers were made and the Liabilities were assumed, and until the Spinoff was complete, DuPont was in a position to, and in fact did, control and dominate Chemours Co.

216. The Fraudulent Transfer Defendants made the Transfers and incurred the Assumed Liabilities with the actual intent to hinder, delay, and defraud the creditors or future creditors of Chemours Co.

217. Plaintiffs have been harmed as a result of the conduct of the Fraudulent Transfer Defendants.

218. Plaintiffs are entitled to avoid the Transfers and to recover property or value transferred to DuPont.

**COUNT 5:**  
**CONSTRUCTIVE FRAUDULENT TRANSFER (DuPont and Chemours Co.)**

219. Plaintiffs adopt, reallege, and incorporate the allegations in the preceding paragraphs and further alleges the following:

220. Chemours Co. did not receive reasonably equivalent value from DuPont in exchange for the Transfers and Assumed Liabilities.

221. Each of the Transfers and the assumption of the Assumed Liabilities by Chemours Co. was made to or for the benefit of DuPont.

222. At the time that the Transfers were made, and the Assumed Liabilities were assumed, and until the Spinoff was complete, DuPont was in a position to, and in fact did, control and dominate Chemours Co.

223. The Fraudulent Transfer Defendants made the Transfers and assumed the Assumed Liabilities when Chemours Co. was engaged or about to be engaged in a business for which its remaining assets were unreasonably small in relation to its business.

224. Chemours Co. was insolvent or in contemplation of insolvency at the time of the Transfers or became insolvent as a result of the Transfers and its assumption of the Assumed Liabilities.

225. At the time that the Transfers were made and Chemours Co. assumed the Assumed Liabilities, the Fraudulent Transfer Defendants intended to incur, or believed or reasonably should have believed, that Chemours Co. would incur debts beyond its ability to pay as they became due.

226. Plaintiffs have been harmed as a result of the Transfers.

227. Plaintiffs are entitled to avoid the Transfers and to recover property or value transferred to DuPont.

**COUNT 6:**  
**PUNITIVE DAMAGES**

228. Plaintiffs adopt, reallege, and incorporate the allegations in the preceding paragraphs and further alleges the following:

229. Defendants engaged in willful, wanton, malicious, and/or reckless conduct that caused the foregoing damage upon Plaintiff, disregarding their protected rights.

230. Defendants' willful, wanton, malicious, and/or reckless conduct includes but is not limited to Defendants' failure to take all reasonable measures to ensure PFAS would not be released into the environment and inevitably into Plaintiffs' body which was contaminated and

continues to be contaminated with PFAS in varying amounts over time, causing Plaintiffs significant injury and damage.

231. Defendants have caused great harm to Plaintiff, acting with implied malice and an outrageously conscious disregard for Plaintiffs' rights and safety, such that the imposition of punitive damages is warranted.

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs demand judgment against Defendants, and each of them, jointly and severally, and request the following relief from the Court:

- a. a declaration that Defendants acted with negligence, gross negligence, and/or willful, wanton, and careless disregard for the health, safety of Plaintiffs;
- b. an award to Plaintiffs of general, compensatory, exemplary, consequential, nominal, and punitive damages;
- c. an order for an award of attorney fees and costs, as provided by law;
- d. pre-judgment and post-judgment interest as provided by law;
- e. compensatory damages according to proof including, but not limited to:
  - i. costs and expenses related to past, present, and future treatment of the bioaccumulation of PFAS in Plaintiffs' bodies;
- f. an order barring the transfer of DuPont's liabilities for the claims brought in this Complaint;
- g. an award of punitive damages in an amount sufficient to deter Defendants' similar wrongful conduct in the future;
- h. an award of consequential damages;
- i. an order for an award of attorney fees and costs, as provided by law;
- j. an award of pre-judgment and post-judgment interest as provided by law; and

k. an order for all such other relief the Court deems just and proper.

**JURY DEMAND**

Plaintiff demands a trial by jury of all issues so triable as a matter of right.

Dated: New York, New York  
May 19, 2023

Respectfully submitted,

**NAPOLI SHKOLNIK**

By: /s/ Patrick J. Lanciotti

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